

Notice of Allowability

Application No.

09/867,418

Examiner

Lyle A Alexander

Applicant(s)

HORI ET AL.

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the 2/7/05 amendments.
2. ☒ The allowed claim(s) is/are 1,3,5,7-9,11,13,15-16,19 and 21-23 renumbered as 1-14 respectively.
3. ☒ The drawings filed on 31 May 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

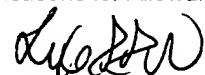
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 9/27/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 2/7/05
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


LYLE A. ALEXANDER
PRIMARY EXAMINER

Art Unit: 1743

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Darling on 2/7/05.

1. (Currently amended) An evaluation method for polycrystalline silicon which is used as a material for pulling single crystal silicon, comprising the steps of:

immersing a predetermined amount of the polycrystalline silicon in a predetermined amount of an agent etchant contained in a vessel, which agent etchant is capable of dissolving the polycrystalline silicon allowing at least a part of the polycrystalline silicon at a surface thereof to dissolve in the etchant; and

~~placing a measuring device in the agent having the polycrystalline silicon dissolved therein using a particle counter to count the number of selected foreign particles of a predetermined size dispersed in the agent so as to predict a free ratio of a single crystal silicon which is to be pulled~~ etchant to determine the quality of the polycrystalline silicon based on the number of foreign particles counted.

2. (Canceled)

3. (Currently amended) An evaluation method for polycrystalline silicon as set forth in claim 1, wherein the polycrystalline silicon immersed in the agent etchant is aggregated or in pellet shape.

4. (Canceled)

5. (Previously presented) An evaluation method for polycrystalline silicon as set forth in claim 1, further comprising the step of:

analyzing the composition of the foreign particles.

6. (Canceled)

7. (Previously presented) An evaluation method for polycrystalline silicon as set forth in claim 1, wherein said foreign particles cause crystal defects.

8. (Previously presented) An evaluation method for polycrystalline silicon as set forth in claim 5, wherein the analysis is carried out using scanning electron microscopy or energy dispersive X-ray spectroscopy.

9. (Currently amended) An evaluation method for polycrystalline silicon as set forth in claim 1, further comprising the step of:

subjecting the ~~agent~~ etchant to a circulation filtering process prior to the immersion of the polycrystalline silicon in the agent.

10. (Canceled)

11. (Currently amended) An evaluation method for polycrystalline silicon as set forth in claim 3, further comprising the step of:

subjecting the ~~agent~~ etchant to a circulation filtering process prior to the immersion of the polycrystalline silicon in the ~~agent~~ etchant.

12. (Canceled)

13. (Currently amended) An evaluation method for polycrystalline silicon as set forth in claim 5, further comprising the step of:

subjecting the ~~agent etchant~~ to a circulation filtering process prior to the immersion of the polycrystalline silicon in the ~~agent~~ etchant.

14. (Canceled)

15. (Currently amended) An evaluation method for polycrystalline silicon as set forth in claim 7, further comprising the step of:

subjecting the ~~agent~~ etchant to a circulation filtering process prior to the immersion of the polycrystalline silicon in the ~~agent~~ etchant.

16. (Currently amended) An evaluation method for polycrystalline silicon as set forth in claim 8, further comprising the step of:

subjecting the ~~agent etchant~~ to a circulation filtering process prior to the immersion of the polycrystalline silicon in the ~~agent~~ etchant.

17. (Canceled)

18. (Canceled)

19. ^{currently amended}
(~~Previously presented~~) An evaluation method for polycrystalline silicon as set forth in claim 1, wherein the ~~agent etchant~~ is hydrofluoric acid ~~and~~ or nitric acid.

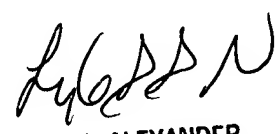
20. (Canceled)

21. (Currently amended) An evaluation method according to claim 1, wherein the ~~agent etchant~~ having the polycrystalline silicon dissolved therein is a liquid when the ~~measuring device~~ particle counter is placed therein.

22. (Currently amended) An evaluation method according to claim 1, further comprising the step of:

determining the kind or origin of the ~~selected~~ foreign particles.

23. (Currently amended) An evaluation method according to claim 1, wherein the ~~selected~~ foreign particles are attached to or contained in the polycrystalline silicon.


LYLE A. ALEXANDER
PRIMARY EXAMINER